Multnomah County Health Department

Food Handler's Manual

Multnomah County
Health Department

Safe Food for a Healthy Community

Food Handler Office Location
Call (503) 988-5257

Online Testing
www.mchealthinspect.org

Food Handler Card Testing

Walk-in testing is available at our office location.
For information and testing times call **(503) 988-5257**.

Cost (cash only):		**$5.00**	Each test
	+	**$5.00**	New card
		$10.00	**Total**

Read the entire manual, then take the test. The test contains 20 multiple choice questions. Minimum passing score is 15 correct answers.

Please bring Photo ID with you when you come. It is required.

Video and audio training and testing methods are offered at our office location include training videos available in Chinese (Cantonese and Mandarin), English, Korean, Spanish, Russian, and Vietnamese. An oral compact disc will be used for testing. Allow 40 minutes for viewing the video and 20 minutes for the test. Arrive at least one hour before closing time.

On-line Food Handler at: www.mchealthinspect.org
Cost: $10.00 (debit card or credit card only)

Lost food handler cards can be replaced in our office for a $5 duplicate card fee. Online food handler cards can be reprinted from the website for free. The expiration date remains the same.

Food Handler's manuals are also available in Spanish, Korean, Chinese, Vietnamese, and Russian at any Multnomah County library**.**

How to use this book

This book is intended to help you learn what you need to know to obtain a food handler card. The information is based on the Oregon Food Sanitation Rules.

In order to get a food handler card you must pass the test with a score of 75% or more.

Learning Objectives

Learning objectives are the topics in this book that you must know and will appear on the test. They are:

Objective 1 - Foodborne Illness

Foodborne illness is when people get sick from eating contaminated food. Food can be contaminated by germs, chemicals, toxins or physical contamination. Food contaminated with organisms (germs) does not always look, smell or taste different from safe food.

When people get foodborne illness their symptoms may include diarrhea, vomiting, fever, cramping and nausea. Depending on the cause, symptoms may develop in a few minutes or up to several days. Some symptoms may last several days and can be as serious as death.

The different types of hazards that can make food dangerous include:

Bacteria: Different kinds of germs can make people sick. Bacteria are one kind of germ. They grow fast and they may cause foodborne illness. Some bacteria make toxins that act like a poison. Cooking does not destroy most of these toxins. Almost always, the food looks and smells good, but it may have enough bacteria or toxin to make someone sick. Toxins can occur in many foods that have not been kept cold enough or hot enough. Some common bacteria include:

- **Salmonella**. Often associated with undercooked chicken and eggs. Causes stomach pain, diarrhea, chills, nausea, vomiting and fever.
- **E. Coli** . Often associated with undercooked beef or improperly washed produce. Causes severe cramping, diarrhea and may lead to kidney failure.
- **Staphylococcus.** Carried on hands, face and in noses of most people and spread by poor handwashing. Causes nausea, vomiting, diarrhea and cold sweats.

Viruses: A virus is another kind of germ that causes illness when it gets into the food. You can have a virus and not know it. Even before you start feeling sick, you may be passing viruses into the food by not washing your hands after coughing, sneezing or using the toilet. This is why good handwashing is so important. Some common viruses include:

- **Norovirus.** Spread by poor handwashing and touching ready-to-eat foods. Causes nausea, vomiting and diarrhea.

- **Hepatitis A.** Spread by poor handwashing after hands have been contaminated by feces. Causes fever, nausea, vomiting, fatigue, cramping and jaundice.

Parasites: Tiny worms that live in fish and meat are called parasites. Cooking fish and meat to the right temperature will kill parasites.

Chemicals: People can also get sick when chemicals get into the food. Be sure to keep chemicals away from food.

Physical Contamination: Physical contamination is when outside objects are accidentally introduced into food. Food items may arrive already contaminated with dirt and pebbles or be contaminated inside a restaurant from broken glass or when old cooking equipment is flaking.

Remember:

- Food can make us sick when it has germs growing in it, or if it has been contaminated by chemicals or dangerous objects

- You cannot tell if food is contaminated by smelling, tasting or looking at it. When in doubt – throw it out.

- Food that is contaminated often looks, smells and tastes like safe food

Objective 2 – Your Role in preventing Foodborne Illness

Working at a restaurant means you have a responsibility to keep customers, co-workers and yourself safe and healthy. The five major mistakes that often cause foodborne illness are:

- Bad or no handwashing
- Employees working while they are ill or sick
- Cross contamination, spreading germs
- Not cooking food to the right temperature
- Inadequate temperature control (allowing foods to be in the danger zone)

It is your job to prevent foodborne illness by:

- Washing your hands well and wash them often - every time hands may have become contaminated
- Do not work when you are sick
- Store and handle foods safely to prevent contamination
- Cook foods to required internal temperatures **(see back cover for guide)**
- Maintaining hot and cold temperatures (keeping foods out of the danger zone)

Food service workers also have to remember these special rules:

Smoking: Do not smoke or chew tobacco while you are working or when you are near food or dishwashing areas. Smoke only while you are on a break. After you smoke, double wash your hands before you return to work.

Eating: Do not eat in areas where food is being prepared or where food equipment is kept.

Drinking: When you are thirsty while working, you may drink from a closed beverage cup with lid and straw **or** cup with lid and handle. This is allowed only if the food worker is careful to prevent contamination of hands, equipment, any service items, and exposed food.

Remember:

- Working in a restaurant means you have a responsibility to keep your customers, coworkers and yourself safe and healthy
- Do not work while you are sick
- Wash your hands well and wash often
- Keep foods out of the danger zone
- Know and follow the special rules for food workers about smoking, eating and drinking

Objective 3 – The role of management

Someone at your restaurant must be in charge during all hours of operation. The *person in charge* (PIC) is usually a manager or supervisor, but can be anyone who can demonstrate food safety knowledge and is given the authority to oversee other employees. The PIC is responsible for:

- Knowing the food sanitation rules and the procedures within your establishment
- Providing you with information you need to perform your job
- Ensuring all employees preparing and serving food are healthy
- Setting the tone for what food safety activities occur or don't occur within the facility
- Training and ensuring that food handlers practice activities that prevent foodborne illness.

Remember:

- There must always be a person in charge (PIC) at the restaurant

- The person in charge is responsible for ensuring all food workers are healthy

- The person in charge is responsible for training and ensuring everyone practices good food safety

Objective 4 – Handwashing

Always practice good handwashing, by knowing how to wash your hands and when to wash your hands. Wash your hands often when working with food and drinks. This gets rid of germs that can make people sick. Wash your hands for **20 seconds** with warm running water and soap, and then dry them with clean paper towels, or an air dryer.

How to wash your hands

- Use running warm water and soap
- Scrub hands and rinse thoroughly (20 seconds)
- Dry hands with single-use towel, or air dryer
- Do ***not*** dry your hands on your apron or wiping cloths

When to wash your hands

- Before starting work
- After using the toilet **and** again when entering work area
- After handling raw food and raw animal products
- After handling dirty dishes
- After handling garbage
- After cleaning or using chemicals
- After blowing nose, sneezing, coughing, or touching eyes, nose or mouth
- After smoking or using tobacco products
- After eating or drinking
- Before putting on food service gloves

Double Handwashing *is required*:

- When you start work or return to your work area after leaving
- After using the restroom. Always wash hands after using the restroom and wash hands again when returning to your work area (kitchen, bar, wait station).
- If you come into contact with any bodily fluids (coughing or sneezing into your hands, smoking or eating)

Gloves and Handwashing
Gloves and other barriers do not replace handwashing. Wash your hands before putting gloves on and when changing to a new pair. Wash your hands and change gloves:

- As soon as they become soiled or torn
- Before beginning a different task
- After handling raw meats, fish, or poultry
- Before handling ready-to-eat food

Cuts and sores
Do not work with foods if you have an infected wound (cut, burn, or sore) on your hand. If the wound is not infected, you may use a band aid and wear disposable gloves to cover the wound.

Remember:

- Wash your hands and wash them often

- Wash your hands with soap and warm water for 20 seconds

- Double wash your hands when you start work or return to your work area, after using the restroom and after touching bodily fluids

- Gloves do not replace handwashing, you still need to wash your hands

Objective 5 – Employee illness

Never work when you are sick and have one or more these foodborne illness symptoms:

- Diarrhea
- Vomiting
- Jaundice (your skin turns a yellow color)
- Fever with a sore throat

If you are sick you must:

- Let your boss or the person in charge know that you are ill and cannot work
- Not work in food service for 24 hours after the last instance of diarrhea or vomiting has stopped.

Cuts and Sores

Do not handle food with an infected boil, cut, burn, or sore on the hand or wrist. Food may be handled if the injury is not infected and is covered with a clean bandage and a latex-free glove.

Remember:

- Never work when you have diarrhea, vomiting, jaundice or fever with a sore throat

- If you are sick, do not work in food service for 24 hours after the last instance of diarrhea or vomiting has stopped.

- If you are sick tell your boss or the person in charge

Objective 6 – Cross Contamination

You want all the food you use to be safe and free of germs. This section talks about how to safely store and handle food so that you prevent cross-contamination. ***Cross contamination*** happens when germs from raw or unclean food gets into foods that are ready to serve or that will not be cooked before you serve them.

You can prevent cross contamination in six main ways:

- **Storing food safely**
- **Keeping your restaurant free of pests**
- **Keeping food and chemicals separate**
- **Handling food safely**
- **Using gloves safely**
- **Washing and Sanitizing**

Storing food safely: Storing food safely means that food is kept safe from being contaminated by other foods, dirty equipment or chemicals. Follow these tips:

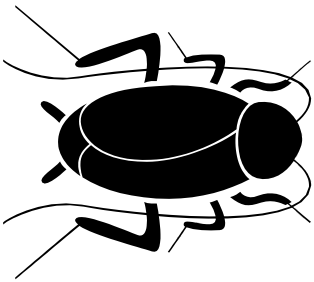
- Store raw meat, fish, poultry and eggs on the lower shelves of the refrigerator with the meats that have to be cooked the hottest on the lowest shelves
- Don't store raw meats; beef, pork, lamb, fish, poultry or eggs above foods that will not be cooked before serving
- Keep different types of raw meat separate from each other
- Store unwashed food or raw food away from ready-to-eat food
- Wash your hands between handling raw meat and foods that will not be cooked before eating
- Store foods in containers made of food-grade materials
- Never reuse chemical containers to store food.

Keeping your restaurant Pest Free: Cockroaches, flies, mice and rats can carry germs that cause disease. These pests can get into your building. Don't let them in, and don't let them eat. Some of the ways to keep pests out are to:

- Clean the building often on a regular schedule
- Keep doors and windows closed or screened
- Cover small holes where mice and rats can get in
- Cover garbage with lids that fit well and remove garbage often. Keep the areas around garbage containers clear of trash

If pests become a problem, a licensed pest control service may be needed to help solve it. Be very careful with pesticides, if they must be used. Pesticides are poisons that kill rodents and insects, but they can also poison humans. Read the directions on the can or the box, or have your boss read them to all of the staff. Be sure you understand how to use pesticides properly.

Before using pesticides, put away all food and cover work surfaces. Be sure the pesticides you use are approved for use in food establishments.



Chemicals in a restaurant: Working in a restaurant means you will use chemicals like bleach or other sanitizers. It is important to follow these rules to keep food safe from chemicals:

- Know what the directions say for using chemicals. Read the labels and talk to your manager about when to use them and how much to use.

- Keep chemicals away from food and clean utensils. If chemicals must be stored in the same room, be sure they are stored in their own area. The area should be below food and utensils, so there is no chance of chemicals splashing or dripping onto the food and utensils.

- Keep all chemicals in the bottles or boxes they come in. If you put them in a different container, label them clearly.

- ***Food Additives.*** Chemicals you add to food as you prepare it are called food additives. Some additives are used to freshen or whiten food. Additives containing sulfites are not allowed to be used in restaurants. Some people are very allergic to sulfites. Food allergies may cause severe illness or death.

Handling food safely: Handling food safely means that when you are preparing or handling food, you are not contaminating it with germs. Follow these tips to handle food safely:

- Wash your hands before working with food and before wearing gloves.

- Use utensils or disposable gloves to work with ready-to-eat food.

- Wash, rinse and sanitize food preparation sinks, preparation surfaces, cutting surfaces and all the utensils and knives every time you finish with a job or between preparing different foods.

- Keep serving utensils in the food with the handle sticking out of the food. Utensils may also be kept in an ice water bath, cold running water bath, or water that is kept at 135°F or above. **Never leave utensils in room-temperature water.**

- Use ice scoops with handles or use tongs to place ice in cups. Do not use a cup or glass to scoop ice. The sides of the cup may get dirty from handling or the glass may shatter or chip in the ice.

- Do not re-serve unpackaged foods (tortilla chips, bread, rolls etc.) even if they were untouched.

- Wiping cloths must be stored in a sanitizer solution (1 teaspoon of bleach per gallon of water).

- If foods become contaminated it is best to discard the food. (example: if raw meat dripped onto lettuce for salads, do not wipe or wash away the meat juice, throw the lettuce away)

Washing and Sanitizing: It takes more than soap and water to keep a food business clean and safe. In restaurants an extra step called ***sanitizing*** is required when dishwashing and cleaning equipment that touches food. Sanitizing kills the germs found on dirty dishes and equipment.

Using a three compartment sink for dishwashing:

1. **Scrape** and/or pre-rinse food from the dishes and utensils.

2. **Wash** with detergent and hot water in the first sink.

3. **Rinse** with clean, hot water to remove any soap or food in the middle sink.

4. **Sanitize**, in the third sink, by immersing for a half minute to kill harmful bacteria. Too much bleach is not good. Use ***test papers*** to test the strength of the solution. If the test indicates less than 50 ppm, make a new solution. Other chemical sanitizers may be used if they are approved by the Health Department.

5. **Air dry** the dishes and utensils. Do not wipe with towels. Towels can spread germs, and the sanitizing process is wasted.

When mixing sanitizer solution, use test papers to make sure you are mixing the proper concentration: 50-100 ppm Chlorine (1 teaspoon bleach to 1 gallon water)

When using “Quats” (Quaternary Ammonium Compounds) for sanitizing, follow the label directions carefully. Using too much can leave a residue behind that can cause illness.

Using a dishwashing machine:

- **Chemical dishwasher:** Use test papers on the final rinse to ensure that the machine is sanitizing the dishes.

- **Hot water dishwasher:** Use a thermometer to make sure the final rinse is reaching 165°F for stationary rack machines and 180°F for other machines.

Using gloves safely: Gloves are a good way to avoid touching ready-to-eat foods with your bare hands. It is important to remember that gloves carry germs on them just like hands. Change your gloves:

- Between different tasks

- After handling raw meat

- Before touching ready-to-eat foods

- As soon as they become ripped or torn

- After touching your face or hair

Wearing gloves does not replace handwashing. Always wash your hands before and after wearing gloves.

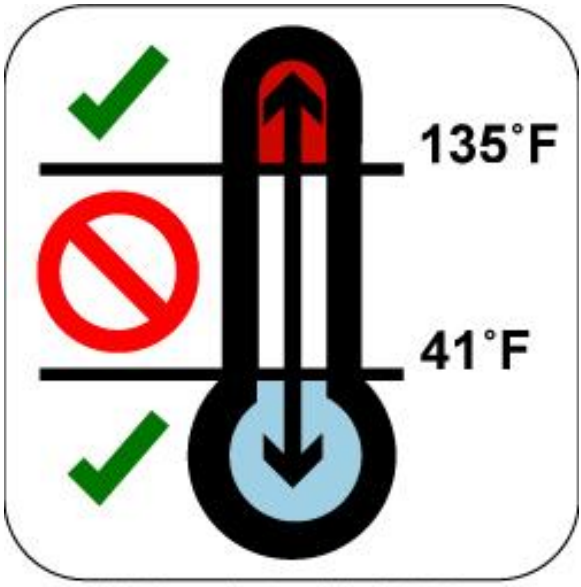
Remember:

- Store food safely by making sure raw meats are separate and do not touch each other
- Keep chemicals away from food
- Handle food safely by washing your hands after working with raw food, before working with ready-to-eat foods and between tasks
- Wearing gloves does not replace handwashing
- Wash, rinse and sanitize equipment between uses
- keeping wiping cloths in sanitizer solution (1 teaspoon bleach per gallon of water)
- When washing dishes by hand remember the steps: scrape, wash, rinse, sanitize, air dry
- When using bleach as a sanitizer, mix one teaspoon bleach per gallon of water
- Always use test papers to make sure sanitizer solution is the proper concentration
- Keep your restaurant free of pests
- Do not spray pesticides or pest chemicals while the kitchen is preparing food

Objective 7 – Temperature Control

Potentially hazardous foods are foods that will grow bacteria when held at temperatures in the danger zone, or room temperature. The danger zone is between 41º F and 135º F. This means that:

- 135°F or hotter is the proper temperature for hot holding potentially hazardous food.
- 41°F or colder is the proper temperature for cold holding potentially hazardous food.
- Food being heated or cooled must move through the danger zone as quickly as possible.
- You cannot make food safe to eat when food has been in the danger zone for four hours or more. It should be thrown away.

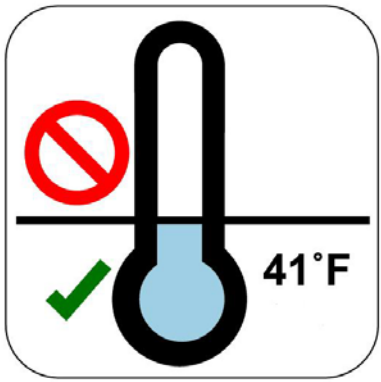


Potentially hazardous foods: Potentially hazardous foods are foods that can make you sick if not kept at the right temperature. These include:

- Beef, chicken, pork, fish and seafood
- Cooked pasta, cooked rice and cooked vegetables
- Cut melon, lettuce and tomatoes
- Milk, dairy products and eggs

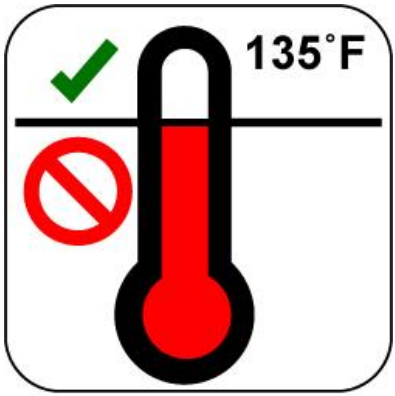
Keeping foods cold

Always keep cold food at 41°F or colder. Fish, shellfish, poultry, milk and red meat will stay fresh longer if you hold them cold at 41°F or colder. Cover foods being stored on the top section of a refrigerated preparation unit.



Keeping foods hot

After the food is cooked and ready to serve, you will need to keep it warm enough to stop any germs from growing. You must turn on steam tables, soup warmers and heated surfaces before you need them so that they will be hot enough when you put the cooked food into them. Keep hot food at 135°F or hotter. Stir food to help keep the food on top hot. Check the temperature often to ensure it is staying hot.



Tips on using a Food Thermometer

- Use a thermometer with a smaller diameter probe on thin foods such as thin hamburger patties
- Check the internal temperature of the food toward the end of the cooking time
- Place the thermometer in the thickest part of the meat or in the center of the food to get a true reading. (Do not touch the bone with the stem of the thermometer, that makes a false reading)
- When taking temperatures of a large amount of food like a big piece of meat, be sure to take the temperature in two or more locations
- Compare your thermometer reading to the Required Cooking Temperatures on the back cover to determine if your food has reached a safe temperature
- Wash and sanitize the thermometer each time you check the temperature of a food

Calibrating a Dial Food Thermometer

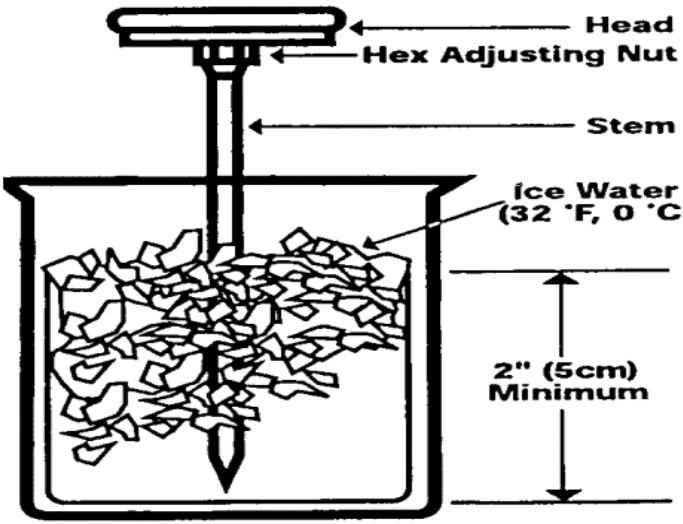
When you use a dial food thermometer, you need to make sure the temperature it gives you is accurate. An easy way to do this is to use ice and water.

1) Pack a large cup to the top with crushed ice and water.

2) Put the thermometer at least 2 inches into the ice water. After 30 seconds, read the dial. It should read 32°F.

3) If it does not read 32°F after 30 seconds, you need to:

    - Leave it in the ice slurry. Add ice as it melts
    - Use pliers or a wrench and turn the nut on the back of the thermometer until the needle reads 32°F
    - Wait 30 seconds. Keep repeating these steps until the thermometer reads 32°F



Moving through the danger zone: At a restaurant food is moved through the danger zone when we **thaw, cook, cool and reheat foods**. Follow these important rules when doing those activities.

Thawing Frozen Foods: Never cook large roasts, turkeys, or stuffed turkeys while they are still frozen. Their large size makes them hard to cook evenly. The outside may be cooked, while the inside may still be frozen. Always thaw frozen food completely before cooking. There are three approved methods to thaw frozen foods:

- Thaw food in the refrigerator; it may take a few hours or up to a few days. This is the best and safest way. Be sure to put meat in a container to catch meat juices and keep them from dripping.

- Put food under cold running water. **Do not** use warm or hot water.

- Defrost in a microwave oven. You must then cook and serve it right away.

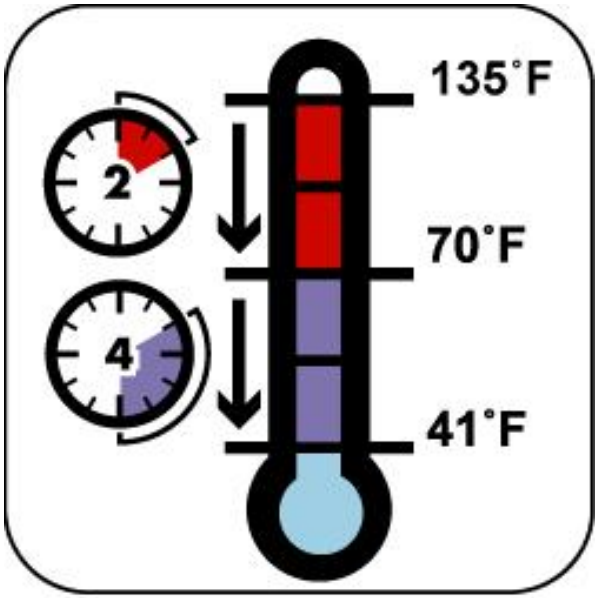
- Never thaw food at room temperature on the counter, or in warm water. These methods will allow germs to grow rapidly.

Cooling Hot Foods: When cooling food it is important to move the food through the "Danger Zone" as quickly as possible to keep food safe. Always use commercial grade equipment for cooling foods. If you must make food in advance or save leftover food, cool it as fast as you can to prevent bacteria growth and toxin production. Reheating will not destroy toxins.

Whatever the food is and however it is cooled it must be cooled from:

- 135ºF to 70ºF within two hours and then from,

- 70ºF to 41ºF within four more hours

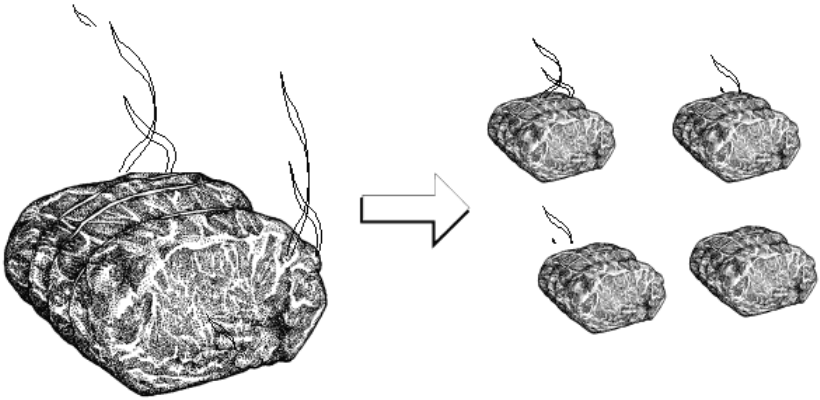


There are several ways to cool hot foods. Different methods work best for different types of foods. Follow these tips on:

- **Cooling solid foods**
- **Cooling soft or thick foods**
- **Cooling liquid foods**

Cooling Solid Foods: When cooling solid cooked foods such as roasts, turkey, and solid cuts of meat be sure to:

- Cut large roasts and turkeys into smaller portions. This will help them to cool faster
- Put all meats and other hot food in the refrigerator uncovered



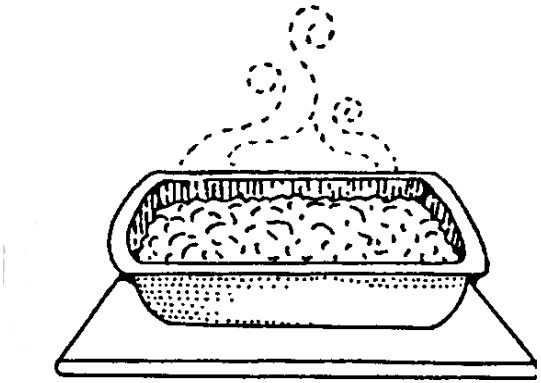
Cooling Soft or Thick Foods: Examples of soft/thick foods are refried beans, rice, potatoes, stews, chili, thick soup or thick sauces. Cooling thick food is not easy. Whenever possible, use a flat sheet pan and spread the food out as shallow as you can to speed up the cooling. When cooling food in shallow metal pans, be sure to:

- Pour hot food into shallow metal pans. The shallower the pan the faster the food will cool.

- Stir foods often, this will speed up cooling time.

- Once food cools to 41ºF, you can place food in a larger container and cover it.

Air Movement - Air in the refrigerator must be able to move around the food. The pans and dishes need to have space between them; do not crowd them. Do not stack pans on each other. **Do not cover the food while it is cooling.** A cover may be put on after the food has fully cooled.



Cooling Liquid Foods: You can use shallow metal pans or you can use the ice and water bath to cool thin soups and sauces. To cool food using an ice bath, follow these steps:

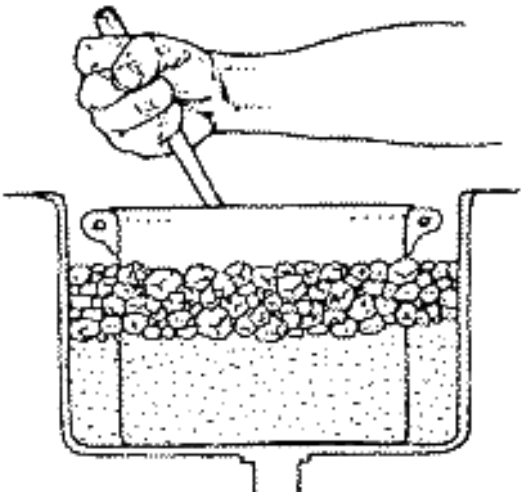
1) Close the drain in a large sink. Place the metal pot or pan of hot food in the sink.

2) Fill the sink with ice and cold water up to the level of food in the pot or pan.

3) Stir the soup or sauce often so that it cools all the way to the center. Ice paddles or cooling wands can be used to speed up the cooling process.

4) Add more ice as ice melts.

5) Do not move the food to storage until it reaches 41^{o}F or below.



Reheating: Always reheat foods thoroughly to at least **165°F**. Re-heating food must take **less than 2 hours** to get foods from 41°F to 135°F (through the temperature danger zone).

Use stove burners, convection ovens, microwave ovens, or double boilers to heat food. Hot holding units such as steam tables and soup warmers are not designed to heat foods up, only to keep them hot once they have been heated. Stir food to be sure all parts have been properly heated.

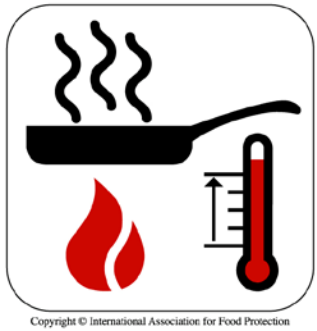
Remember:

- Potentially hazardous food must stay out of the danger zone
- Potentially hazardous foods are foods that can grow germs if they aren't kept at the right temperature
- The danger zone is $41^{o}F$ – $135^{o}F$
- Cold foods must be kept at or below $41^{o}F$
- Hot foods must be kept above $135^{o}F$
- Never leave potentially hazardous foods at room temperature
- When cooling food, it must drop from:
    - $135^{o}F$ to $70^{o}F$ within two hours and then from,
    - $70^{o}F$ to $41^{o}F$ within four more hours.
- Do not use equipment designed to hold hot foods like steam tables and soup warmers to reheat foods

Objective 8 – Final Cooking temperature

Cooking raw food to the proper temperature will kill germs that cause people to become sick.

Different foods have to reach different temperatures to be done or safe. Be sure to cook the food to the temperature that is shown on the chart.



The following are minimum cooking temperatures that must be reached throughout the food to kill germs.

- Rare roast beef: 130ºF for over 2 hours.
- Eggs, fish, other foods: 145ºF
- Pork and pork products: 145ºF
- Ground beef (hamburger), ground fish (fish cakes): 155ºF
- Poultry (chicken, turkey, etc.), stuffed meats, stuffing containing meat or meat juices: 165ºF

Remember:

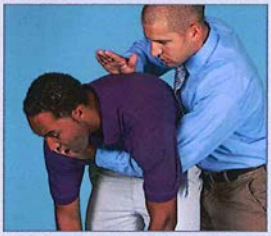
- Cooking food destroys bacteria and other germs in raw food
- Different foods have different temperatures they have to reach to be done
- When checking if food is done cooking, always take an internal temperature using a thermometer

First Aid for Choking

Working in a restaurant means you should know how to help a customer who may be choking. Follow these steps:

1 GIVE 5 BACK BLOWS

- **Adult:**



- **Child:**

- **Infant:**

2 GIVE 5 ABDOMINAL THRUSTS

- **Adult:**

- **Child:**

- **Infant:** (chest thrusts for infant)

TIP: *For infants, support the head and neck securely. Keep the head lower than the chest.*

3 REPEAT STEPS 1 AND 2 UNTIL THE:

- Object is forced out.
- Person can cough forcefully or breathe.
- Person becomes unconscious.

WHAT TO DO NEXT

- IF PERSON BECOMES UNCONSCIOUS — Carefully lower the person to the ground and give CARE for unconscious choking, beginning with looking for an object.
- Make sure **9-1-1** has been called.

American Red Cross

Glossary

Bacteria – Bacteria are germs with only one cell that can multiply into large numbers when food is in the danger zone for more than 4 hours.

Bare Hand Contact Prohibition with ready-to-eat food – Bare hands may not come into contact with food that is ready to eat, such as salad or sandwiches.

Chemicals – In this book, chemicals are referred to as ingredients in cleaning, sanitizing, or pesticide products that make people sick if eaten.

Cold Holding – Cold holding is when you keep food cold by using refrigeration or ice.

Cross Contamination – When germs from one food item are passed to another food item, usually raw food to ready-to-eat food.

Danger Zone – The Danger Zone is when the temperature of food is between 41^{o}F and 135^{o}F. This is called the danger zone because bacteria will grow quickly between these temperatures.

Foodborne Illness- Sickness caused from germs or toxins in food. This is also called food poisoning.

Food Thermometer - A metal-stem probe thermometer used to take temperatures of food.

Hot holding – Holding food hot after it has been properly cooked or reheated. Food must maintain a temperature of 135^{o}F or hotter.

Infected – A cut or burn that is swollen, red, or has pus.

Parasites – These are tiny worms that live in fish, meat and humans.

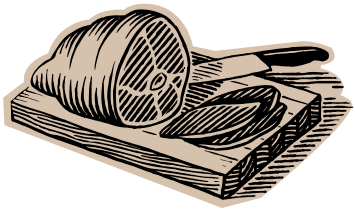
Potentially Hazardous Foods (Time/Temperature Control for Safe Food) – Moist, nutrient-rich foods that supports the growth of bacteria when the temperature is between 41^{o}F and 135^{o}F.

Reheating for Hot Holding – The process of making a cold food hot before placing on warming unit. Food must be heated from 41^{o}F to 165^{o}F within two hours.

Sanitize – The final step to removing bacteria from food contact surfaces that have just been cleaned. Many places use a solution made up of one teaspoon of bleach to one gallon of water to sanitize equipment and utensils.

Virus – Viruses are germs that can only reproduce inside of a living cell. It takes a small number of viruses to make someone sick. Many viruses get into the food from the lack of handwashing, especially after using the toilet and then touching food.

Minimum Cooking Temperatures

	All other foods	145°F
	Fish	145°F
	Pork	145°F
	Hamburger	155°F
	Poultry	165°F